

**Aero Design Ltd.****Work Order Control Sheet**Work Order#: 2016-21 Date Opened: 04 Feb 2016 Title: FabricationAircraft OEM: Robinson Aircraft Model: R44 Product Type: LH Cargo Basket Body and Lid Product Model: Standard Quantity: 1**Work Order Contents**

Work Order/Build Sheets (Procedures Provided)  
Additional Work Sheets (Standard Practice)  
Drawings (See List Below)  
Parts Distribution Sheet  
Sub Component Tags  
Completed Certification (Original)  
Time Sheet (R&D)  
Notes

Initial or N/A

JC
N/A
JC
N/A
N/A
N/A
N/A
N/A

**Build Sheet Contents**

Tasks Initialled  
Dual Inspections Initialled

JC
JC

**Drawing List**

Drawing #	Rev #	Description	Initial or N/A
90611	1	Body Assembly	JC
90612	1	Regular Hoop	JC
84262	2	Basket handle prov.	JC

**Component Completion**

Quantity Complete on This Work Order  
Quantity Incomplete on This Work Order  
Further Processing Required Before Release  
Release to Stock as Components

As Instructed

1
N/A
N/A
N/A

**Certification**

Form One Completed  
Serviceable (Green) Tag Completed  
In Process (Yellow) Tag Completed  
Unserviceable (Red) Tag Completed  
Parts Tracking Tags (White) Completed  
Parts Placed in Stores for Distribution

Initial or N/A

N/A
N/A
N/A
N/A
N/A
N/A

**Additional Documentation**

Documentation of a minor change  
Non-Conformance Report Required  
Service Difficulty Report Required

Initial or N/A

N/A
N/A
N/A

**Billing**

Local (Aero Design)  
Research and Development  
Third Party

JC
N/A
N/A

**Traveller**

Work performed by:

Print: Andrew Bartfai

ICC / Dual Inspection performed by:

Print: Jason Rekve

Work Order closed by:

Print: Jeff ClarkeSign: [Signature]Sign: [Signature]Sign: [Signature]SCA: AD07SCA: AD01SCA: AD02Date: 11-Feb-16Date: 11-Feb-16Date: 25-Feb-16

Approved Manufacturing Facility 73-04

Form 20.0.03

Rev. Original 23 Sep 2014

## CARGO BASKET BODY FABRICATION - COMMON

2016-21

1x R44 Lt

### General

These instructions apply to all cargo basket body assemblies. Refer to the following drawings, at the current revision, for dimensions and details:

#### **Bell 206L/407** – Right side only

69811, Revision 3 – Standard Low Mounted Basket

94511, Revision 0 – Extra-Wide Low Mounted Basket

94611, Revision 0 – Extra-Wide Low Mounted Ski Basket

76611, Revision 0 – High Mounted Ski Basket

*Options* 70404, Revision 2 – Front end cutout – 698

70411, Revision 0 – Front end cutout – 945/946

#### **Eurocopter AS350/AS355** – left or right

77611, Revision 1 – Short Basket

76411, Revision 3 – Medium Basket (left or right)

78411, Revision 2 – Long Basket

94011, Revision 0 – Extra Large (ski) Basket

*Options* 70406, Revision 2 – Front end cutout – 764/776/784/940

#### **Robinson R44** – left or right

→ 90611, Revision 0 – Standard Basket (left or right)

#### **Bell 206B** – right side only

80211, Revision 0 – Short Basket

80311, Revision 0 – Medium Basket

81111, Revision 0 – Long Basket

*Options* 70406, Revision 2 – Front end cutout – 802/803/811

#### **Bell 429** – right or left

95911, Revision 0 – Standard Basket

#### **Bell Medium** – left or right

75111, Revision 0 – Standard Basket

95511, Revision 0 – Extra Large (ski) Basket

*Options* 70407, Revision 1 – Front end cutout – 751

704, Revision – Front end cutout – 955

#### **MD600**

82811, Revision 0 – Standard Basket

#### **Options** – Applicable to all models

70403, Revision 5 – Auxiliary Latch

## CARGO BASKET BODY FABRICATION - COMMON

Complete  
(initial or SCA #)

Work Order: 2016-21

Date Open: 04 FEB 2016

### 1. Rim Assembly – Basket Body

AD-07

- a. Cut and fit  $\frac{3}{4}$ " x 0.035 material to fit rim jig.
  - i. 1 or 2 lid prop bushing holes in short tube – refer to drawing
- b. Record material PO on attached material list.
- c. Remove writing on tubes with acetone and scotch bright.
- d. For extra large baskets – drill #30 (0.129) vent holes to vent stringer tubes into rims.
- e. 94611 (206L/407 XL ski) only – drill for 4 threaded bushings before assembling rim.

### 2. Weld Rim Assembly.

AD-05

- a. Record welding rod PO on attached material list.
- b. 94611 (206L/407 XL ski) only – weld 4 threaded bushings into inboard rim tube.

### 3. Inspection

AD-07

- a. Rim for complete welds

### 4. Frame assembly – body

AD-07

- a. General
  - i. Vent holes shall be #30 (0.129), and located inside the structure wherever possible to allow venting of weld gasses through existing holes (i.e. lid prop bushing, hoops, etc.)
- b. Grind corner welds from step 2 on rim to allow hoops to sit flat.
- c. Pull required hoops from stock - standard, attachment, handle.
  - i. If hoops are not in stock see detailed procedure sheet for specific hoop fabrication.
  - ii. Ensure vent hole is located at centre of tube to vent spine tubes.
- d. Assemble hoops with attachment lug locating jig and hoop spacing jig.
  - i. Ensure correct order and orientation of hoops. Refer to drawing.
    1. Attachment lugs are on inboard side.
    2. Handle bracket bushings are on outboard side, second hoop from both ends.  
May be on attachment hoops.
  - ii. Run 3/8-24 tap into attachment lugs to ensure clear threads.
  - iii. Bolt attachment lug locating jig to attachment hoops with 3/8-24 bolts.
  - iv. Attach inboard and outboard hoop spacing jigs to all hoops using 1" C-clamps. Raise jigs approximately 2" off table to allow room to weld around hoops.
  - v. Attach bottom (spine) jig to all hoops using 1" C-clamps along the centre line of the basket. Ensure jig is straight prior to tightening all clamps.
- e. Cut  $\frac{1}{2}$ " x 0.035 material to fit spine jig.
- f. Cut  $\frac{1}{2}$ " x 0.035 material for strut to fit from lower inboard attachment to upper outboard rim.
  - i. Refer to applicable drawing for position, not required on some baskets.
- g. Option: Cut  $\frac{1}{2}$ " x 0.035 material for front end cutout. Record material PO on attached material list.
- h. 90611 (R44) only: Cut  $\frac{1}{2}$ " x 0.035 material to fit front end structure. Record material PO on attached material list.
- i. Drill vent holes into attachment hoop and/or rim to vent strut(s) and front end cutout.



- j. Record hoop WOs and material POs on attached material list.
- k. Remove writing on tubes with acetone and scotch bright.
- l. Insert rim assembly into jig and set frame assembly onto rim. Ensure correct orientation of lid prop bushings in rim to frame. Bushing hole must be closer to attachment side.
- m. Align hoops to rim in accordance with drawing. General positions:
  - i. Extra large baskets
    - 1. inboard side of hoops (attachment side) aligns to OUTSIDE of rim
    - 2. outboard side of hoops (handle side) aligns to INSIDE of rim
    - 3. forward and aft hoops align to INSIDE of rim
  - ii. All other baskets
    - 1. inboard side of hoops (attachment side) aligns to INSIDE of rim
    - 2. outboard side of hoops (handle side) aligns to INSIDE of rim
    - 3. forward and aft hoops align to INSIDE of rim, except R44

## 5. TIG weld frame to rim assembly.

- a. Ensure lug locating jig and hoop locating jigs are in place. Jigs must remain in place for as long as practical during welding.
- b. Strut tubes and front end cutout (see step 4.f. and g.) must be welded in place after the hoops are welded to the rim. Jig(s) must be in place prior to welding strut tubes.
- c. Robinson R44 (90611) requires fitting and welding of forward end after remainder of basket frame is welded. Use jig to support front hoop.
- d. Record welding rod PO on attached material list.

AD-05

## 6. Inspection

- a. Frame assembly for complete welds.

AD-07

## 7. Mesh assembly.

- a. Pull sheet of expanded mesh from stock. Record material PO on attached material list.
- b. Cut mesh to size for body.
- c. Remove surface rust with scotch-brite.
- d. Bend body mesh – use table with bend markings on top. Lock wheels on table.
  - i. For extra wide baskets only –
    - 1. Set  $\frac{3}{4}$ " angle along edge of table under mesh sheet. Set 1.5" square tube on top of mesh aligned with angle on edge of table. Clamp in place with 6" C-clamps.
    - 2. Bend upper edge of sheet just past a cell intersection to make a flange 2.5" - 3.25" wide. Closer to 2.5" is preferred, full cell intersection on flange side at bend is required.
    - 3. Bend down by hand as far as possible, then use a hammer to flatten the bend tight against the angle on the edge of the table.
  - ii. Using markings on table, align sheet to indicated edge.
  - iii. Using markings on table, align 3" tube to required position and clamp tube in place.
  - iv. Bend mesh by hand tightly over tube along length of tube.
  - v. Keeping mesh in place, un-clamp 3" tube, move to other position and clamp tube in place.
  - vi. Bend mesh by hand tightly over tube along length of tube.
- e. Install attachment lug jig onto basket frame.

AD-07

- f. Ensure end struts are welded in basket frame if required by the drawing.
- g. Insert mesh into basket.
  - i. General
    - 1. Some cells may interfere with correct positioning, especially at the upper corners and around struts. Bend cell(s) in as required, do not cut cells off.
    - 2. Ideally welds will be located on mesh intersections. Shift mesh if possible to minimize welds located off mesh intersections.
    - 3. Ensure mesh reaches all edges of basket BEFORE trimming. Regardless of progress in clamping, remove clamps and shift mesh if required.
    - 4. Ensure cleco clamps are placed from the inside of the basket to allow removal during welding. Cleco clamps may be used from the outside during fitting, but must be removed prior to welding.
  - ii. Extra large baskets only – seat corner of mesh with flange into inboard upper corner of frame. Use C-clamps on edge of flange as required to maintain tight fit.
  - iii. Starting at inboard top edge of basket, clamp mesh to hoop near top rim using cleco clamps onto hoops. For regular size baskets, edge of mesh should sit approximately half way up rim tube.
  - iv. Working down the inboard side, clamp mesh to hoops with cleco clamps. Clamp down into radius of hoop and continue clamping as required to maintain tight fit in corner of hoop. After the corners are tight, two clamps just onto the radius on both ends should be sufficient to hold the corner tight, remove all extra clamps.
  - v. Clamp mesh to spine in at least 1 place per section.
  - vi. Working up the outboard side, clamp the mesh into the radius of hoop and continue clamping as required to maintain tight fit in corner of hoop. After the corners are tight, 2 clamps just onto the radius on both ends should be sufficient to hold the corner tight, remove all extra clamps.
  - vii. Trim upper outboard edge of mesh if required, edge of mesh must be low enough on rim tube to prevent the weld from protruding above the edge of the rim. Some sheets are tapered and may require ½ to 1 cell to be removed over some or all of the length of the basket. De-burr cut edges with a sanding disc on a die-grinder. Straighten cut cells with duck-bill pliers. Clamp mesh near upper edge to hoops with cleco clamps after trimming.
  - viii. Trim ends to land on hoops, at mesh intersections if possible.
- h. Cut mesh to fit ends. Record material PO on attached material list.
  - i. Remove surface rust with scotch-brite.
  - ii. Ensure mesh is cut at intersections where possible.
  - iii. Bend top edge of mesh 1/8"-3/16" down at 45 degrees
  - iv. Cut for front end cutout if required.
- i. 90611 (R44) only: Cut mesh to fit upper forward end. Record material PO on attached material list.
  - i. Remove surface rust with scotch-brite.
  - ii. Ensure mesh is cut at intersections where possible.
  - iii. Bend top edge of mesh 1/4" down at 60 degrees.
  - iv. Fit mesh to front end of basket.



## CARGO BASKET BODY FABRICATION - COMMON

Complete  
(initial or SCA #)

AD-05

8. Weld mesh to frame assembly per drawing.
  - a. Ensure lug locating jig is in place prior to welding.
  - b. General welding requirements for all baskets, MIG welding:
    - i. Every intersection at top edges.
    - ii. Every intersection at ends.
    - iii. First 5 intersections down on hoops, then every second intersection.
    - iv. Every intersection along spine.
    - v. Extra large baskets – every intersection along corner.
    - vi. Every intersection around ends
    - vii. Every intersection along struts (if applicable)
  - c. Bend and trim cells bent in to fit mesh as required and weld in position.
  - d. Grind high spots off body mesh welds on ends before welding end mesh.
  - e. 90611 (R44) only – weld lid prop bushing (step 9) into rim BEFORE welding upper mesh on forward end of basket assembly.
  - f. Record welding rod PO on attached material list.

### 9. Weld basket components

- a. TIG weld lid prop bushing(s), one or two per drawing.
  - i. Record welding rod PO on attached material list.
  - ii. Record lip prop bushing WO on attached material list.
- b. TIG weld caps to close top of 1" hoops as applicable.
- c. 94611 (Bell206L/407 XL ski) only: cut rim over cross tube gap.
  - i. Cut inboard rim on aft end. Grind flush with hoops.
  - ii. TIG weld caps on open tubes.
  - iii. Record cap material PO on attached material list.
- d. 95911 (Bell 429) only: placard bracket to forward upper corner of basket.
  - i. Record welding rod PO on attached material list.
  - ii. Record placard bracket WO on attached material list.

AD-05

### 10. Clean up

- a. Grind high spots off mesh welds.
- b. Tighten mesh using special pliers. Tighten enough to remove "oil canning", where mesh springs in or out. Do not tighten in corners of hoops, mesh will be deformed.
- c. Drill #9 through lid prop bushing(s). De-burr hole(s).
- d. Remove surface rust with scotch-brite pad.

AD-07

### 11. Final Inspection

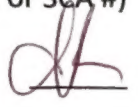
To be completed by a different person than the previous steps.

- a. Basket body assembly for complete welds, and required minimum mesh weld locations.
- b. Filled vent holes – usually on hoops
- c. Overall condition and conformity to drawing(s).
  - i. Hoops for height.
  - ii. Rim for width and length and alignment.
  - iii. Lid prop lugs in correct ends.
  - iv. Fore/aft strut in hoop if required by drawing.
- d. Material lists complete.

dk

## CARGO BASKET BODY FABRICATION - COMMON

Complete  
(initial or SCA #)



- e. Tag complete basket body assembly in preparation for powder coating.

### 12. Powder Coating

- a. Parts are to be powder coated white in accordance with commercial practices.
- b. Record powder coating PO.
- c. Inspect powder coating on receiving.
- d. Tag basket body assembly and place into stock in preparation for assembly.

## CARGO BASKET LID FABRICATION - COMMON

2016-21

1x R44 LIT

### General

These instructions apply to all cargo basket lid assemblies. Refer to the following drawings, at the current revision, for dimensions and details:

#### **Bell 206L/407** – Right side only

69812, Revision 3 – Standard Low Mounted Basket; Extra-Wide Low Mounted Basket

94612, Revision 0 – Extra-Wide Low Mounted Ski Basket

76612, Revision 0 – High Mounted Ski Basket

#### **Eurocopter AS350/AS355** – left or right

77612, Revision 1 – Short Basket

69812, Revision 3 – Medium Basket (left and right)

78412, Revision 2 – Long Basket

94012, Revision 0 – Extra Large (ski) Basket

#### **Robinson R44** – left or right

→ 90612, Revision 0 – Standard Basket (left or right)

#### **Bell 206B** – right side only

80212, Revision 0 – Short Basket

80312, Revision 0 – Medium Basket

81112, Revision 0 – Long Basket

#### **Bell 429** – right or left

95912, Revision 0 – Standard Basket

#### **Bell Medium** – left or right

75112, Revision 0 – Standard Basket

95512, Revision 0 – Extra Large (ski) Basket

#### **MD600**

82812, Revision 0 – Standard Basket

### Options

70405, Revision 3 – Walkway

70402, Revision 1 – Lid Door



## CARGO BASKET LID FABRICATION

Complete  
(initial or SCA #)

Work Order: 2016-21

Date Open: 04 Feb 2016

1. Rim Assembly – Basket Lid AD-07
  - a. Cut and fit  $\frac{3}{4}$ " x 0.035 material to fit rim jig, 45 degree ends.
    - i. 1 or 2 lid prop bushing holes in short tube – refer to drawing
  - b. Record material PO on attached material list.
  - c. Remove writing on tubes with acetone and scotch bright.
2. Weld Rim Assembly AD-05
  - a. Record welding rod PO on attached material list.
3. Inspection AD-07
  - a. Rim for complete welds
4. Frame assembly – Lid AD-07
  - a. General
    - i. Vent holes shall be #30 (0.129), and located inside the structure wherever possible to allow venting of weld gasses through existing holes (i.e. lid prop bushing)
  - b. Insert rim from step 2 into jig.
  - c. Cut and fit  $\frac{3}{4}$ " x 0.035 material, 21" long, for lid cross members.
  - d. Record material PO on attached material list.
  - e. Remove writing on tubes with acetone and scotch bright.
  - f. Drill vent holes into rim to vent cross members into rim.
  - g. Locate cross members in lid rim. Refer to drawing for spacing of cross members. Clamp cross members with C-clamps to jig.
5. Frame assembly – Lid with optional walkway modification AD-07
  - a. Fit cross members to rim in accordance with step 4.
  - b. Attach walkway jig with C-clamps. Ensure correct orientation of rim, refer to drawing.
  - c. Cut  $\frac{1}{2}$ " x 0.035 material for walkway stringers to fit between lid cross members. Record material PO on attached material list.
  - d. Drill vent holes into cross members at walkway stringers.
  - e. Align walkway stringers on walkway jig using cleco clamps near both ends of each stringer, and clamp stringer to jig using a C-clamp in the centre.
6. Weld frame assembly. AD-05
  - a. Record welding rod PO on attached material list.
  - b. Jigs must remain in place for as long as practical during welding.
7. Inspection AD-07
  - a. Frame assembly for complete welds.

## CARGO BASKET LID FABRICATION

Complete  
(initial or SCA #)

AD-07

### 8. Mesh assembly.

Note: 95912 (Bell 429) does not have mesh. Skip to step 10.

- a. Pull sheet of expanded mesh from stock. Record material PO on attached material list.
- b. Cut mesh to size for lid.
- c. Remove surface rust with scotch-brite.
- d. Ensure lid is prepared for mesh on the correct side.

### 9. Weld mesh to frame assembly per drawing.

AD-05

- a. General welding requirements for all lids:
  - i. Every intersection on all edges.
  - ii. First 5 intersections along cross members, then every second intersection.
- b. MIG weld both short sides.
- c. Clamp lid over spacer at centre of lid to pre-tension mesh.
  - i.  $\frac{3}{4}$ " for lids under 76"
  - ii. 1" (check) for lids over 76"
- d. Weld remainder of mesh as indicated in a.
- e. Record welding rod PO on attached material list.

### 10. Weld lid components.

AD-05

- a. Handle brackets, locate in accordance with drawing.
  - i. Standard location:  $\frac{1}{4}$ " outside of last cross member on both ends.
  - ii. Record handle bracket WO and welding rod PO on attached material list.
- b. Lid prop bushing(s).
  - i. one or two in accordance with drawing.
  - ii. Record lid prop bushing WO and welding rod PO on attached material list.
- c. Placard bracket. – not installed on 95912 (Bell 429)
  - i. Locate on cross member to set bracket in centre bay of lid.
  - ii. Record placard bracket WO and welding rod PO on attached material list.

### 11. Clean up

AD-07

- a. Grind high spots off mesh welds.
- b. Tighten mesh using special pliers. Tighten enough to remove "oil canning", where mesh springs in or out.
- c. Straighten lid using frame attached under welding table. Work carefully, avoid excessive force to prevent kinking rim tubes.
- d. Drill #9 through lid prop bushing(s). De-burr hole(s).
- e. Drill for lid bumpers using  $\frac{1}{4}$ " (#3) centre drill.
  - i. 3 places for lids under 76"
  - ii. 4 places for lids over 76"
- f. Remove surface rust with scotch-brite pad.

### 12. Final Inspection

To be completed by a different person than the previous steps.

- a. Basket lid assembly for complete welds, and required minimum mesh weld locations.
- b. Material lists complete.
- c. Overall condition and conformity to drawing(s).

OK

## CARGO BASKET LID FABRICATION

Complete  
(initial or SCA #)

OK

### 13. Powder Coating

- a. Parts are to be powder coated white in accordance with commercial practices.
- b. Record powder coating PO.
- c. Inspect powder coating on receiving.
- d. Tag lid assembly and place into stock in preparation for assembly.



Work Order: 2016-21

## Material Tracking Sheet

1 of 2

Date Opened: 04 Feb 2016

Robinson R44

Lid Fabrication

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
	<u>1</u>		<b>90612-01-</b> <u>02</u>	<b>Lid Assembly</b>	(-01 RH, -02 LH)	
<b>Step 1</b>				<i>Rim Assembly</i>		
	. 2		--	3/4" Tube - Long Rim (55 5/8")	4130 Steel, 3/4" x 0.035 Sqr. Tube	<u>2013-47</u>
	. 2		--	3/4" Tube - Short Rim (22.5")	4130 Steel, 3/4" x 0.035 Sqr. Tube	<u>14099</u>
<b>Step 2</b>				<i>Weld Rim Assembly</i>		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	<u>PO# 14005</u>
<b>Step 3</b>				<i>Inspection - Rim</i>	None	
<b>Step 4</b>				<i>Frame Assembly</i>		
	. 2		--	3/4" Tube - Cross Member (21")	4130 Steel, 3/4" x 0.035 Sqr. Tube	<u>14099</u>
<b>Step 6</b>				<i>Weld Frame Assembly</i>		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	<u>PO# 14005</u>
<b>Step 7</b>				<i>Inspection - Frame Assembly</i>	None	
<b>Step 8</b>				<i>Mesh Assembly</i>		
	. 1		--	Mesh (lid - 55" x 22")	3/4-16F Expanded Mild Steel sheet	<u>15037</u>
<b>Step 9</b>				<i>Weld Mesh</i>		
	. A/R		--	Welding Rod	ER70S-6 MIG Wire	<u>PO# 15059</u>

Work Order: 2016-21

## Material Tracking Sheet

2 of 2

Date Opened: 04 Feb 2016

Robinson R44

Lid Fabrication

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
<b>Step 10</b>				<i>Weld Lid Components</i>		
	. 1	84262	84262-01	Upper Handle Bracket Assembly		wo# 2014-38
	. . 4		36273-01	Lid Bracket	321 Stainless, 0.050 Sheet	
	. . 2		36275-02	Support	304 Stainless, 5/16" Rod	
	. A/R		--	Welding Rod	ER308L TIG Rod	PO# 14028
	. 1		49216-01	Spacer (Lid prop)	304 Stainless, 1/2" Dia.	wo# 2015-84
	. A/R		--	Welding Rod	ER308L TIG Rod	PO# 14028
	. 1		36204-10	Placard Bracket	1018 Steel, 0.035" Sheet	PO# 15061
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	PO# 14005
<b>Step 11</b>				<i>Clean Up</i>	<i>None</i>	
<b>Step 12</b>				<i>Inspection - Final Assembly</i>	<i>None</i>	
<b>Step 13</b>				<i>Powder Coating</i>		16011

Work Order: 2016-21

## Material Tracking Sheet

1 of 2

Date Opened: 04 Feb 2016Robinson R44  
Hoops Fabrication

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
Step 1	2		49210-02	Hoop - standard	4130 Steel, 1/2" x 0.035 Sqr. Tube	2014-36
Step 1	1		49210-02	Hoop - with handle provisions	4130 Steel, 1/2" x 0.035 Sqr. Tube	14049
Step 2				Welding		
	.2	84262	84272-01	Bushing	4130 Steel, 5/16" x 0.058 Rnd. Tube	PO# 15024
	.A/R		--	Welding Rod	ER70S-2	PO# 14005
Step 3				Inspection	None	
Step 1	1		90622-01- 02	Hoop - attachment	(-01 RH, -02 LH)	2014-36
	.1		--	1/2" Tube - hoop	4130 Steel, 1/2" x 0.035 Sqr. Tube	2014-36
Step 2				Welding		
	.2		69823-02	Lug	1018 Steel, 5/8" Rod	
	.A/R		--	Welding Rod	ER70S-2	PO# 14005
Step 3				Finishing and Inspection	None	





## Aero Design Ltd.

9888 A Malaspina Rd., Powell River, BC  
V8A 0G3, 604-483-AERO (2376)

Quantity:

1

PN:

90621-01-01 *02 JC.*

Aircraft:

Robinson

Model: R44

Description:

Mount Hoop

*AFT R44 LH*

Supplier:

Aero Design

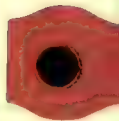
Color:

N/A

WO#:

2014-36

PO# N/A



Work Order: 2016-21

Material Tracking Sheet  
Robinson R44  
Basket Body Fabrication

1 of 2

Date Opened: 04 Feb 2016

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
	1		90611-01-02	Basket Assembly	(-01 RH, -02 LH)	
Step 1				Rim Assembly		
	. 2		--	3/4" Tube - Long Rim (55 5/8")	4130 Steel, 3/4" x 0.035 Sqr. Tube	2013-47
	. 2		--	3/4" Tube - Short Rim (22.5")	4130 Steel, 3/4" x 0.035 Sqr. Tube	14099
Step 2				Weld Rim Assembly		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	Po# 14005
Step 3				Inspection - Rim	None	
Step 4				Frame Assembly		
	. 2		49210-02	Hoop - standard	4130 Steel, 1/2" x 0.035 Sqr. Tube	2014-36
	. 1		49210-02	Hoop - with handle provisions	4130 Steel, 1/2" x 0.035 Sqr. Tube	2014-36 14049
	. 1		90621-01-XX	Aft Attachment hoop		See attached 2014-36
	. 1		90622-01-XX	Forward Attachmen Hoop		See attached 2014-36
	. 4		--	1/2" Tube - spine	4130 Steel, 1/2" x 0.035 Sqr. Tube	14099
	. 1		--	1/2" Tube - strut	4130 Steel, 1/2" x 0.035 Sqr. Tube	14099
	. 1		--	1/2" Tube - cross member (21")	4130 Steel, 1/2" x 0.035 Sqr. Tube	14099
Step 5				Weld Frame Assembly		
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	Po# 14005
Step 6				Inspection - Frame Assembly	None	
Step 7				Mesh Assembly		
	. 1		--	Mesh (Body - 48" x 56")	3/4-16F Expanded Mild Steel sheet	15037
	. 1		--	Mesh (End - 22" x 15.5")	3/4-16F Expanded Mild Steel sheet	15037
	. 1		--	Mesh (End - 22" x 9")	3/4-16F Expanded Mild Steel sheet	15037
	. 1		--	Mesh (End - 22" x 21")	3/4-16F Expanded Mild Steel sheet	15037

Work Order: 2016-21

Date Opened: 04 Feb 2016

Material Tracking Sheet  
Robinson R44  
Basket Body Fabrication

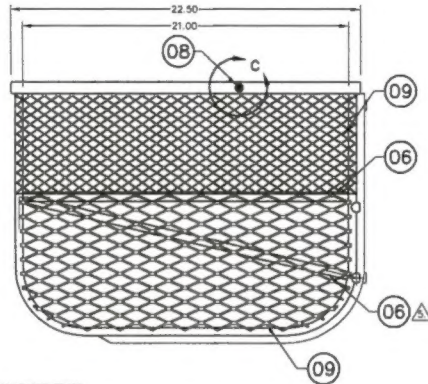
2 of 2

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
<b>Step 8</b>				<i>Weld Mesh</i>		
	. A/R		--	Welding Rod	ER70S-6 MIG Wire	PO# 15059
<b>Step 9</b>				<i>Weld Basket Components</i>		
Step 9.a.	. 1		49215-01	Spacer (Lid prop)	304 Stainless Steel, 1/2" Dia.	WO# 2014-84
	. A/R		--	Welding Rod	ER308L TIG Rod	PO# 14028
Step 9.b.	. 1		--	Cap	1018 Mild Steel, 0.032" Sheet	PO# 9010
	. A/R		--	Welding Rod	ER70S-2 TIG Rod	PO# 14005
<b>Step 10</b>				<i>Clean Up</i>	None	
<b>Step 11</b>				<i>Inspection - Final Assembly</i>	None	
<b>Step 12</b>				Powder Coating		16011



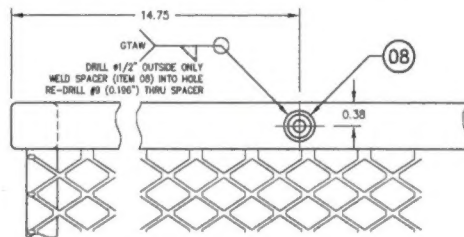
2016-21

1xLH



## NOTES:

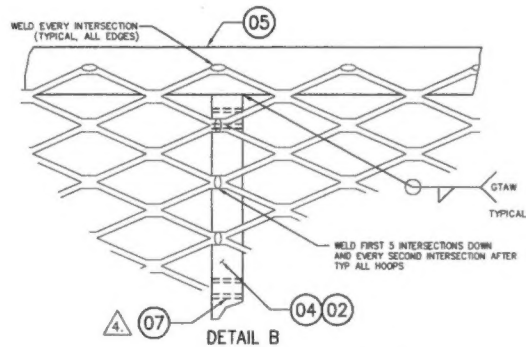
1. REMOVE ALL BURRS AND BREAK SHARP EDGES.
2. PRIOR TO WELDING, DRILL #30 VENT HOLES IN ASSEMBLY FOR VENTING OF WELD GASES.
3. WHEN ASSEMBLY IS COMPLETE, FILL ALL VENT HOLES WITH ROSETTE WELD.
4. WELDING OF 4130 STEEL TO BE COMPLETED BY GTAW METHOD TO AMS 2685C.
5. 4130 AND 1018 STEEL: WELDING ROD SHALL CONFORM TO ER70S-2 OR EQUIVALENT.
6. STAINLESS AND 4130 STEEL: WELDING ROD SHALL CONFORM TO ER308L OR EQUIVALENT.
7. INSTALL ITEM 7 (HANDLE BRACKET ASSEMBLY) IN ACCORDANCE WITH AERO DESIGN LTD. DRAWING 84282 TYP 2 PLACES.
8. STRUT MEMBER ON FWD END OF BASKET ONLY.
9. THOROUGHLY CLEAN AND POWDER COAT BASKET SUB-ASSEMBLIES PRIOR TO ASSEMBLY.



DETAIL C

SCALE 1:1

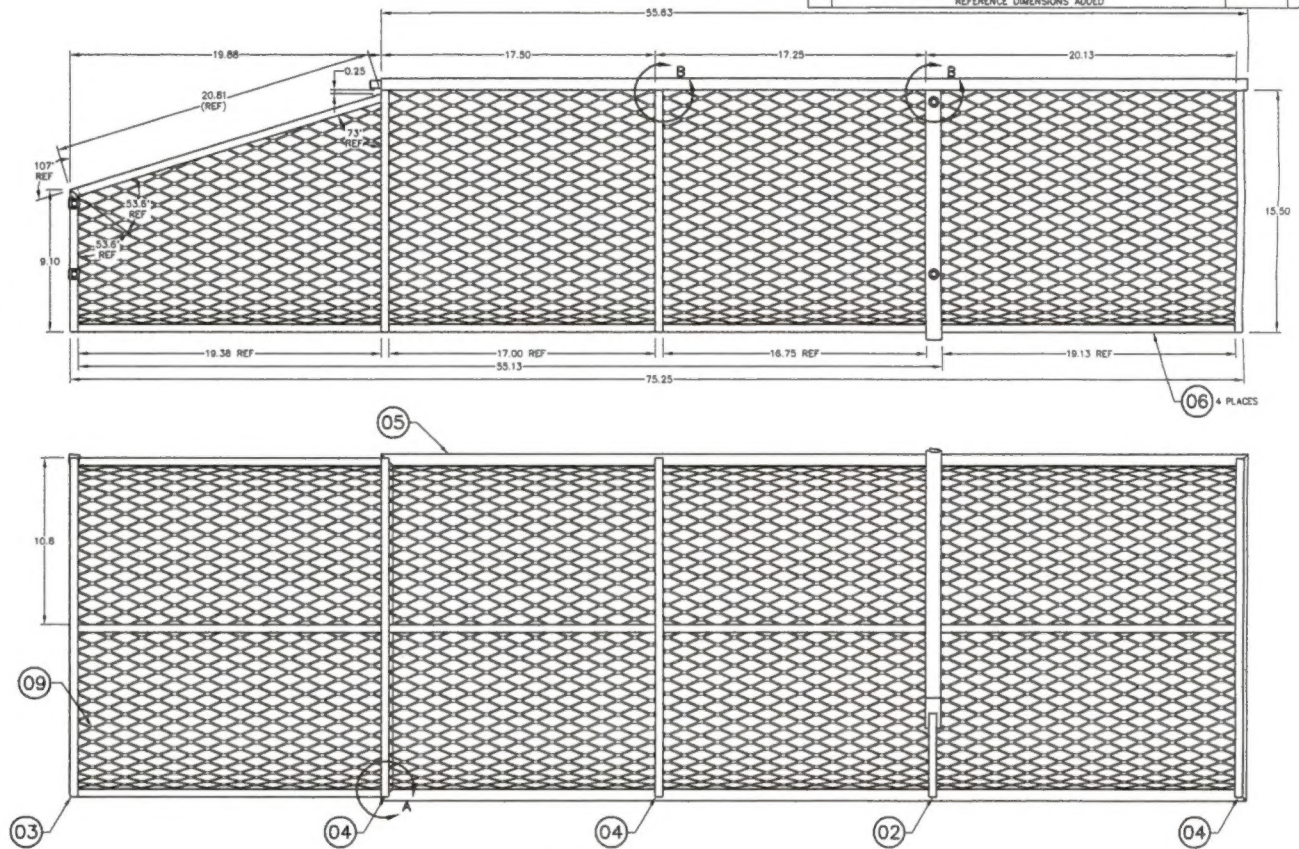
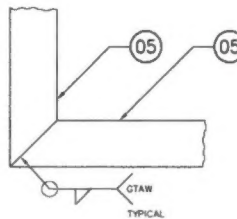
VIEW LOOKING AT FRONT RIM OF BASKET



DETAIL B

SCALE 1:1

VIEW LOOKING AT INNER SURFACE OF BASKET, OUTBOARD SIDE

01 BASKET BODY ASSEMBLY  
RH CONFIGURATION SHOWN, LH OPPOSITE

DETAIL A

SCALE 1:1

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REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		
1	TITLE BLOCK UPDATED; WELDS DOWN SIDE INCREASED; WELDING ROD UPDATED; REFERENCE DIMENSIONS ADDED	BJC	16/05/2014

A/R/A/R	3/4-16F	09	MESH	STEEL	COMMERCIAL		
1 1	49215-01	08	SPACER				
1 1	84282-01	07	BASKET HANDLE PROVISIONS ASSEMBLY				
A/R/A/R	06	TUBE	4130 STEEL COND. N	MIL-T-6736	0.5 X 0.035 SQR. TUBE		
A/R/A/R	05	TUBE	4130 STEEL COND. N	MIL-T-6736	0.75 X 0.035 SQR. TUBE		
3 3	49210-02	04	HOOP				
1 1	90622-01-02	03	FORWARD ATTACHMENT HOOP (LEFT HAND)				
1 1	90622-01-01	03	FORWARD ATTACHMENT HOOP (RIGHT HAND)				
1 1	90621-01-02	02	AFT ATTACHMENT HOOP (LEFT HAND)				
1 1	90621-01-01	02	AFT ATTACHMENT HOOP (RIGHT HAND)				
1 1	90611-01-02	01	BASKET BODY ASSEMBLY (LEFT HAND)				
1 1	90611-01-01	01	BASKET BODY ASSEMBLY (RIGHT HAND)				
-02	-01	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
QTY	QTY				LIST OF MATERIALS		
APPROVALS				DATE			
DRAWN: JEFF CLARKE				03 SEPT 2010			
CHECKED: E. BURGIN							
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .0010 X.XXX ±0.010 X.XX ±0.03 X.X ±0.1				ROBINSON R44, R44 II QUICK RELEASE CARRO BASKET BASKET BODY ASSEMBLY			
SCALE 1 : 4				DWG. NO. DWG. NO. REV.			
SHEET 1 OF 1				A1 90611 1			

APPROVALS  
 DRAWN: JEFF CLARKE  
 CHECKED: E. BURGOIN  
 DATE: 03 SEPT 2010



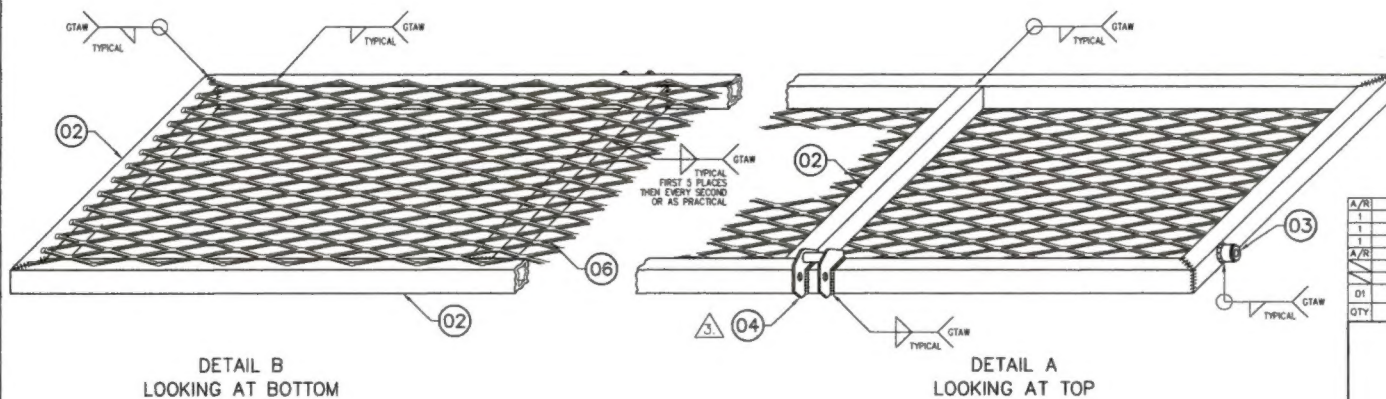
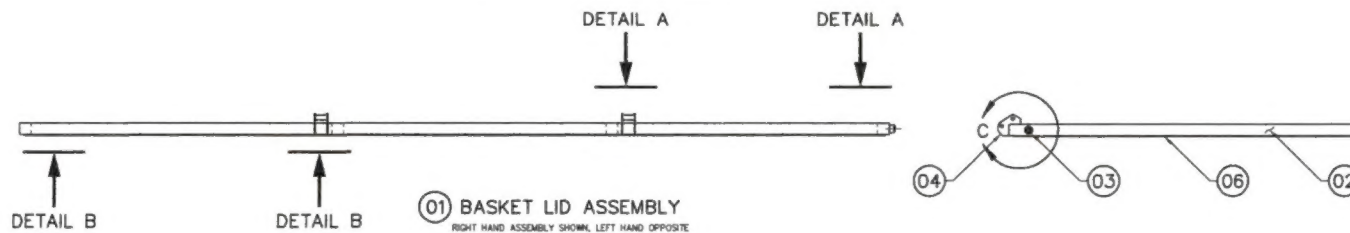
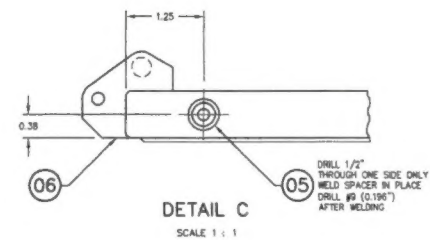
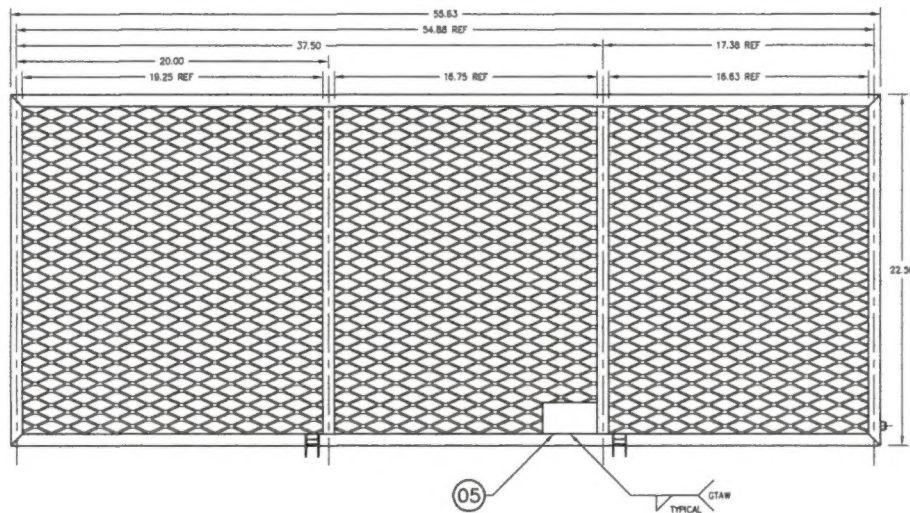
**AERO DESIGN LTD.**  
 8808A MALASPINA ROAD  
 POWELL RIVER, BC, CANADA, V8A 0G3  
 TEL: 604.483.3376  
 www.aerodesign.ca


UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS ARE IN INCHES.  
 TOLERANCES ON:  
 DECIMALS ANGLES  
 X.XXX ±0.010 ±1/2°  
 X.XX ±0.03  
 X.X ±0.1

ROBINSON R44, R44 II  
 QUICK RELEASE CARGO BASKET  
 BASKET BODY ASSEMBLY  
 SCALE 1:1  
 SHEET 1 OF 1  
 A1 90611 1



2016-21 1x LH



- NOTES:
1. REMOVE ALL BURRS AND BREAK SHARP EDGES
  2. WELDING OF 4130 STEEL TO BE COMPLETED BY GTAW METHOD TO AWS 258SC.  
4130 AND 1018 STEEL: WELDING ROD SHALL CONFORM TO ER70S-2 OR EQUIVALENT.  
STEAINLESS AND 4130 STEEL: WELDING ROD SHALL CONFORM TO ER308L OR EQUIVALENT.
-  INSTALL ITEM 4 (HANDLE BRACKET ASSEMBLY) IN ACCORDANCE WITH AERO DESIGN LTD. DRAWING 84283  
TYP 2 PLACES
3. WHEN ASSEMBLY IS COMPLETE, FILL ALL VENT HOLES WITH ROSETTE WELD.
  4. THOROUGHLY CLEAN AND POWDER COAT BASKET SUB-ASSEMBLIES PRIOR TO ASSEMBLY.

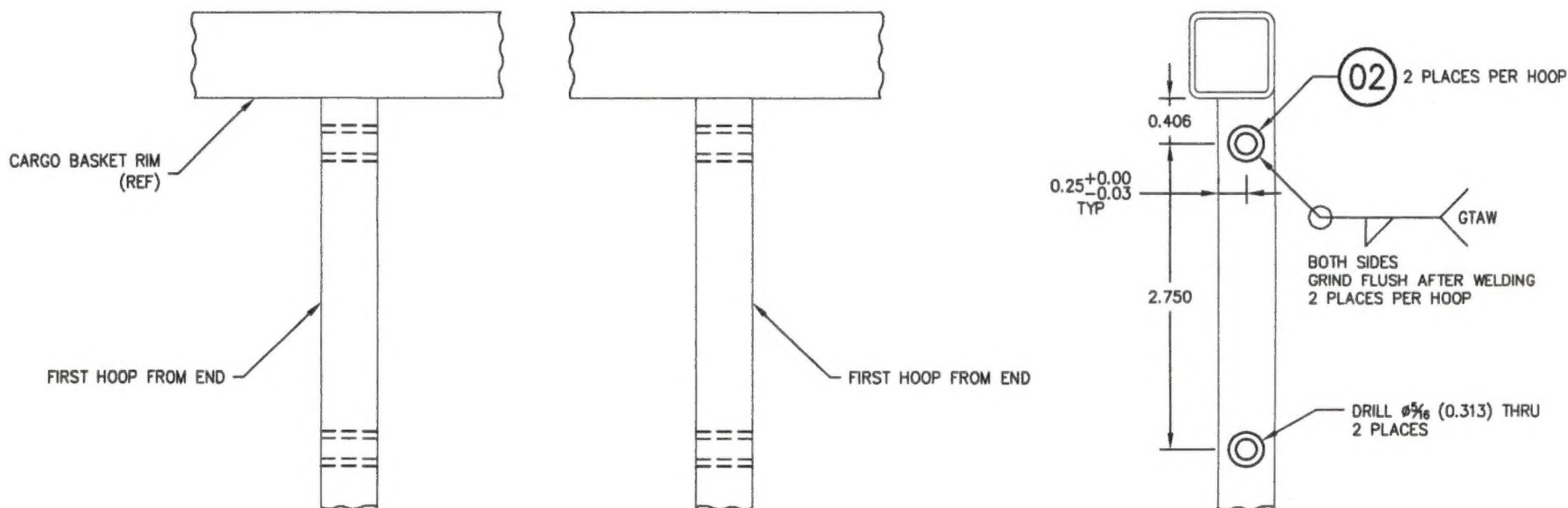
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2016-21

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REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE - CREATED FROM 36262	BJC	03/11/2009
1	CHANGE LOCATION OF BUSHINGS	BJC	29/09/2011
2	UPDATED TITLE BLOCK, MOVE LID PROVISIONS TO 84263	BJC	14/02/2014



### 01 BASKET HANDLE PROVISIONS ASSEMBLY

PROVISIONS TO BE INSTALLED IN HOOPS BEFORE ASSEMBLY TO BASKET RIM

#### NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.
2. WELDING TO BE COMPLETED BY GTAW METHOD TO AMS2685C USING ROD CONFORMING TO ER70S-2 OR EQUIVALENT.

4	84272-01	02	BUSHING
	84262-01	01	BASKET HANDLE PROV. ASSY
01	PART NO.	ITEM	DESCRIPTION
QTY	LIST OF MATERIALS		

APPROVALS	DATE
DRAWN: JEFF CLARKE	03 NOV 2009
CHECKED: E. BURGAIN	

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES.  
TOLERANCES ON:  
DECIMALS ANGLES  
X.XXX ±0.010 ±1/2°  
X.XX ±0.03  
X.X ±0.1



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HELICOPTER CARGO BASKET  
BASKET HANDLE PROVISIONS ASSEMBLY

SCALE	DWG. SIZE	DWG. NO.	REV.
SCALE 1 : 1	A3	84262	2
SHEET 1 OF 1			